

Serial No.: 09/852,994

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A semiconductor ridge waveguide laser diode including
a semiconductor body,
an active region including a ridge waveguide with dimensionally unconstricted end sections,
front and back facets closing said end sections, each with a mirror,
a metallization over said body and said ridge for injecting carriers into said active region, and
means for limiting said injection of carriers at one of said end sections, thus providing at least one unpumped end section,
said limiting means comprising an isolation layer whose lateral extension is wider than the laser's waveguide ridge.

2. (Previously Presented) The laser diode according to claim 1, wherein two means for limiting the injection of carriers are provided, one each at the front and the back end section of the laser diode.

3. (Newly Canceled)

4. (Currently Amended) The laser diode according to claim 3 1, wherein the isolation layer between the laser diode's active region and the metallization is made from SiO_2 , Al_2O_3 , TiN or SiN.

5. (Currently Amended) The laser diode according to claim 3 1, wherein the isolation layer is extending under only a fraction of the area of the metallization.

Serial No.: 09/852,994

6. (Currently Amended) The laser diode according to claim 3 1, wherein the isolation layer is about 50 nm thin and preferably covers an area of approximately 20 μm x 40 μm .
7. (Currently Amended) The laser diode according to claim [3] 1, wherein the isolation layer's longitudinal extension is at least as long as the mean diffusion lengths of the free carriers within the laser's active region.
8. (Canceled)
9. (Currently Amended) The laser diode according to claim 3 1, wherein the isolation layer's lateral extension is ~~wider than the laser's waveguide ridge, but~~ smaller than the metallization's lateral extension.
10. (Currently Amended) The laser diode according to claim 3 1, wherein the laser diode substrate is GaAs, the active region is AlGaAs/InGaAs, and the isolation layer is SiN.
- 11-13. (Newly Canceled)
14. (Currently Amended) The laser diode according to claim 3 1, wherein the isolation layer's longitudinal extension is longer than the mean diffusion lengths of the free carriers within the laser's active region.
15. (New) The laser diode according to claim 1, wherein the active region includes a ridge waveguide with two dimensionally different, unconstricted end sections.

Serial No.: 09/852,994

16. (New) The laser diode according to claim 15, wherein a single isolation layer is provided, placed over the front end section of the ridge waveguide.

17. (New) The laser diode according to claim 15, wherein two isolation layers are provided, one each over the front end section and the back end section of the ridge waveguide.

18. (New) The laser diode according to claim 17, wherein at least one isolation layer is shorter and/or narrower than the metallization.

19. (New) The laser diode according to claim 17, wherein the two isolation layers are of the same shape and/or size.